

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
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1. REPORT DATE (DD-MM-YYYY) 11082009		2. REPORT TYPE THESIS		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE MEASURING BOSTON'S SECURITY INVESTMENT: METHODS AND TOOLS TO ASSESS HOMELAND SECURITY INITIATIVES				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
				5d. PROJECT NUMBER C109-0054	
6. AUTHOR(S) 2D LT SCHROEDER JESSICA M				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) HARVARD UNIVERSITY				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) THE DEPARTMENT OF THE AIR FORCE AFIT/ENEL, BLDG 16 2275 D STREET WPAFB OH 45433				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Unlimited distribution In Accordance With AFI 35-205/AFIT Sup 1					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES 60	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			19b. TELEPHONE NUMBER (Include area code)

Measuring Boston's Security Investment:

Methods and Tools to Assess Homeland Security Initiatives

Policy Analysis Exercise

ABSTRACT

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March 31, 2009

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Executive Summary

In September 2008, the Boston Mayor's Office of Emergency Preparedness (MOEP) tasked us with identifying a suitable performance measurement system for their organization. Specifically, the policy question they asked was: What is the best way the City of Boston can measure the performance of U.S. Department of Homeland Security-funded initiatives since 9/11? Crafting a performance measurement system was a high priority for MOEP, but they lacked the necessary staff and resources to explore a solution in-house. In response to MOEP's request, our Policy Analysis Exercise (PAE) proposes four recommendations for MOEP as they move forward in developing a performance management system:

- 1. Implement a Balanced Scorecard approach**
- 2. Focus on defining and executing critical priorities using Richard A. Clarke's Metropolitan Area Security Plan**
- 3. Draw from DHS-style measures, but also focus more on creating forward-looking measures**
- 4. Undergo the Emergency Management Accreditation Program within 3 years**

After careful review of current performance management systems—particularly those measuring preparedness and security—we determined that the Balanced Scorecard is the most practical, applicable, and sustainable solution for MOEP. Specifically, we believe the value added of the Balanced Scorecard is as follows:



The Balanced Scorecard is:

- **Simple**
- **Sustainable and has long shelf-life**
- **Proven to be successful in public and private sectors**
- **Immediately ready for implementation**
- **A holistic approach that connects all activities at every organizational level with overall strategy**

To ensure that we chose the best performance measurement system for MOEP, we compared the Balanced Scorecard to relevant alternatives using a set of objective criteria.

measure intermediate processes and might indicate milestones in the future, in addition to those measures that reference past performance.

Finally, we are recommending that MOEP ultimately pursue certification through the Emergency Management Accreditation Program. While this program will be costly for MOEP, we believe it will provide a solid baseline to measure MOEP's success to date, and will provide an additional yardstick of accountability for MOEP stakeholders.

SYSTEM AND CRITERIA	Simple format	Objective measurement	Forward- looking measurement	More than mere checklists	Inexpensive
OMB PART System					

In addition to the performance measures developed within Federal agencies, the President's Office of Management and Budget (OMB) requires performance reporting through the Program Assessment Rating Tool (PART). Developed in 2004, the PART program is a uniform method of determining performance across all Federal agencies, helping OMB to measure program success over time and compare the results of similar programs. As OMB describes the PART, "[it] looks at all factors that affect and reflect program performance including program purpose and design; performance measurement, evaluations, and strategic planning; program management; and program results."⁴⁹ Results of the PART are posted on ExpectMore.gov, enhancing transparency and accountability for Federal agencies. In addition, they help inform OMB funding decisions and programmatic modifications.

To assess programs using the PART, OMB asks each program to answer 25 short-answer questions in a predominately yes/no format (a sample of these questions are shown in Figure 10 below). Based on agency answers, OMB then assigns a rating to each program: Effective, Moderately Effective, Adequate, Ineffective, or Results Not Demonstrated. In FY 2008, OMB ranked 16% of U.S. Department of Homeland Security programs as Effective, 34% as Moderately Effective, 28% as Adequate, and 21% as Results Not Demonstrated under their measurement system.

Figure 10: Sample questions from OMB's PART⁵⁰

- Does the program address a specific and existing problem, interest or need?
- Is the program designed so that it is not redundant or duplicative of any other Federal, State, local or private effort?
- Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program?
- Does the program have ambitious targets and timeframes for its long-term measures?
- Does the program (including program partners) achieve its annual performance goals?
- Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?
- Are budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?
- Does the program use strong financial management practices?
- Has the program demonstrated adequate progress in achieving its long-term performance goals?
- Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year?

In a PART assessment, OMB scores each of four areas: Program Purpose and Design, Strategic Planning, Program Management, and Program Results/Accountability. Here we highlight the results of one program, the Federal Emergency Management Agency's Grants and Training Office Assistance to Firefighters Grants program, as an illustration. In 2007, this program was able to answer "Yes" to most PART questions, receiving an "Effective" rating, and scoring high marks for management and performance measurement.



Figure 11: Example 2007 PART score

Section	Score
Program Purpose & Design	80%
Strategic Planning	88%
Program Management	100%
Program Results/Accountability	100%

Similar to the Balanced Scorecard, OMB's PART system looks at more than financial indicators to assess federal programs. Unlike the Balanced Scorecard, however, the PART program does not set specific performance measures – rather, it simply asks if agencies are meeting their targets. This could lead to a situation where an agency is successfully meeting their targets each year, but where the measures are not linked to a long-term vision or strategy. In addition, certain PART questions such as “Does the program have ambitious targets and time frames for its long-term measures?” are ambiguous and open to interpretation. Without more targeted questions, managers could easily be subjective, picking and choosing which areas to highlight when answering the questions. Further, though the PART provides a high-level performance overview for program managers and OMB analysts, it does little in terms of communicating the organization's vision and strategy to lower-level employees, the public, and other stakeholders. Finally, the PART system omits a “Learning and Growth” perspective to measure the development of agency employees.

National Incident Management System (NIMS)

The National Incident Management System's (NIMS) performance evaluation system fails to incorporate objective measurement criteria, forward-looking measures, and reach beyond mere checklists.

SYSTEM AND CRITERIA	Simple format	Objective measurement	Forward-looking measurement	More than mere checklists	Inexpensive
NIMS					

The National Incident Management System provides a unified approach to emergency situations that integrates federal, state, tribal, and local governments, as well as the private and not-for-profit sectors to effectively carry out preparedness and response activities. NIMS ensures a standard command and control structure and facilitates cooperation between entities at different levels of government and different sectors during times of crisis. It also assesses a government's ability to reach the goals of coordinated preparation, prevention, mitigation and response activities by issuing compliance objectives at the beginning of each fiscal year. In FY08, NIMS issued 27 compliance objectives, 24 of which had been instituted in previous years but are required to be continually met by governments each year. Examples of objectives for FY08 for local governments are listed below.⁵¹

Figure 12: Examples of FY08 NIMS Compliance Objectives

CATEGORY	COMPLIANCE OBJECTIVE
Adoption	Adopt NIMS for all Departments/Agencies; as well as promote and encourage NIMS adoption by associations, utilities, nongovernmental organizations (NGOs) and private sector emergency management and incident response organizations.
Preparedness: Planning	Promote and/or develop intrastate and interagency mutual aid agreements and assistance agreements (to include agreements with the private sector and NGOs).
Preparedness: Training	Use existing resources such as programs, personnel and training facilities to coordinate and deliver NIMS training requirements.
Preparedness: Exercise	Incorporate NIMS concepts and principles into all appropriate State/Territorial training and exercises.
Communications and Information Management	Apply common and consistent terminology as used in NIMS, including the establishment of plain language (clear text) communications standards.
Resource Management	Inventory response assets to conform to NIMS National Resource Typing Definitions, as defined by FEMA Incident Management Systems Division.

Until FY 2007, compliance was measured by self-certification by the governor's office for each state and territory. Beginning in FY 2007, NIMS transitioned to performance-based questions and a measurement system that included relevant metrics to determine whether entities met the required objectives. In 2005, NIMS issued the NIMS Capability Assessment Tool (NIMSCAST) for governments at each level to assess and report on their compliance with the stated objectives. The questions that determine compliance are derived directly from requirements and are asked in a "Yes/No" format on NIMSCAST. For example, the first objective under "Adoption" is measured below.

Figure 13: Example NIMS compliance metrics for Objective 1: Adoption⁵²

Compliance Objective 1: Adopt NIMS for all Departments/Agencies; as well as promote and encourage NIMS adoption by associations, utilities, nongovernmental organizations (NGOs) and private sector emergency management and incident response organizations.

1.1 Has the local government formally adopted, for FY08, the National Incident Management System as its all-hazards incident management system?

☐ Yes ☐ No

What legal authority was used to formally adopt NIMS: [Check all that apply.]

☐ Executive Order

☐ Proclamation

☐ Resolution

☐ Other legal authority

When was NIMS formally adopted? ☐

1.2 Does formal adoption of NIMS expire?

☐ Yes

When? ☐

Is there a process for renewing/maintaining the formal adoption of NIMS?

☐ Yes ☐ No

If yes, how? ☐

1.3 Does the local government promote NIMS adoption by associations, utilities, private sector, and nongovernmental organizations?

☐ Yes ☐ No

By using this format, NIMS assesses whether or not governments are complying with the objectives it declares at the beginning of each fiscal year. This system can be subjective and forces organizations to meet a checklist of requirements that, in many cases, are high-level requirements that lack specificity. It may be difficult to come to an overall determination of "Yes" or "No" on meeting objectives because there are many disparate parts that are involved in each objective and there is no mechanism to judge whether an organization is performing at a 45% level of success, versus 80% or 99%.

U.S. Department of Energy: Los Alamos National Laboratory

The Department of Energy's National Laboratory at Los Alamos, New Mexico has done extensive work in developing technologies that enable the country to respond to terrorist attacks more effectively. We interviewed public officials at Los Alamos National Laboratory (LANL) to determine how they are measuring security, and to better understand the concept of quantifying risk as a performance measure. While the risk factor for a given city is useful in directing preparedness actions and providing a snapshot of security, we do not propose that it be used in a vacuum, nor as the solitary performance measure.

Dr. Wiley Davidson, the Program Director of the Threat Reduction Directorate within the Homeland Security Programs at LANL, spoke about measuring security and preparedness in terms of the risk equation, which is detailed below.

Figure 14: Risk equation⁵³

$$\text{Risk} = \text{Threat} \times \text{Vulnerability} \times \text{Consequences}$$

The effect on the overall risk is multiplicative. The coefficient of threat is a measure to be determined by local intelligence. After the threat is quantified, the vulnerability is the amount of people that are exposed to a particular threat, and the consequences can be quantified in either casualties or dollars. In addition to quantitative methods of evaluating threats, there are also qualitative methods that prove useful due to the inherent difficulty in measuring uncertain events, such as natural disasters or terrorist attacks. Risk models are useful mechanisms to assess the threats to a city, but the element of uncertainty that is inherent in determining risk proves to be a formidable challenge. LANL has done extensive work developing models to address the uncertainty inherent in the risk equation. Dr. Davidson spoke to the methods available to assess the threat of a natural disaster or a terrorist attack.

There are probabilistic approaches and possibilistic approaches. We have a whole methodology we've developed here [at Los Alamos National Laboratory] that uses possibilistic approaches. It allows you to take some constructs like "likely" or "unlikely" and turn those into a more hard core probabilistic treatment. It's called an Evolved Logic Methodology... You've got a mixture of quantitative and qualitative information, so you need to methodologies that allow you to compare quantitative and qualitative information in risk equations.⁵⁴

MOEP stated that the organization has confidence in the same methodology detailed by Dr. Davidson, and bases many of its decisions on the same risk framework. Looking at the risk a city faces can be a useful indicator of preparedness and response capabilities when used in concert with other metrics.

Quantitative measure of outputs derived from the public health community

Another approach to assess security was first proposed by the public health community to evaluate their work on responding to bio-terrorism and other threats.⁵⁵ Two major objectives drove their endeavors: (1) to measure the ability of the public health community to respond to all events—not just bio-terrorism—by measuring its preparedness for other threats such as West Nile Virus and Severe Acute Respiratory Syndrome (SARS), and (2) to measure preparedness by evaluating the pieces of the overall processes that are involved in prevention and response.⁵⁶ This measurement tool helps organizations measure their ability to prevent, prepare for, mitigate and respond to terrorist and man-made disasters by assessing the relevant outputs associated with each outcome. Glen Woodbury, a faculty member and associate director of Executive Education Programs for the Naval Postgraduate School's Center for Homeland Defense and Security, applies this measurement process to the security preparedness realm.

Woodbury's theoretical example is presented in Figures 15 and 16, which details the process of measuring outputs as a means of quantifying outcomes. The first step is defining the desired outcomes, followed by defining the measurable outputs. An outcome is directly related to the overall mission of an organization. Outputs are initiatives that are put in place to achieve an organization's mission, or outcome.⁵⁷ After outputs are defined, each receives a score between one and five from the list below. This example is measuring an organization's ability to evaluate potential threats.

Figure 15: Output scoring system

Score Definitions

- 0 = No effort or system underway nor recognition of the need
- 1 = Recognition of the need but no effort or resources to accomplish the output
- 2 = Initial efforts and resources underway to achieve the output
- 3 = Moderate progress towards accomplishing the output
- 4 = Sustained efforts underway and output near to fulfillment
- 5 = Output achieved and resources devoted to sustain the effort

Figure 16: Output scoring matrix

Outputs	Score
1. Adopt/develop a model to assess threats	2
2. Ensure collaboration of traditional and non-traditional investigative agencies	2.5
3. Create a lead organization to oversee threat identification	4
4. Develop strategies to overcome barriers to the sharing of information and intelligence	2.5
TOTAL (20 points possible)	11

The scores of each output are compiled to indicate how close an organization is to achieving a stated outcome. Twenty points are possible in this hypothetical measurement, and the organization achieved a score of eleven in the example above. One could say that this entity's "increased ability to evaluate threats as they are identified" is not yet realized but is progressing.⁵⁸ In general, this system has the tendency to be complex, arbitrary, and disconnected from overall strategy.

Measuring preparedness via human resources

In December 2008, we interviewed Brian D'Andrea, a U.S. Navy Emergency Preparedness Liaison Officer, and Jeff Phillips, the former Director of Emergency Operations for the State of New Mexico.⁵⁹ D'Andrea has extensive experience responding to emergencies in the United States, to include Hurricane Katrina in 2005. He emphasized the importance of communication and coordination between entities in responding to natural disasters and terrorist attacks. He highlighted the necessity of a measurement mechanism to assess the degree to which communication between local, state, regional, and federal levels has changed as a result of the application of DHS funds. An example measurement would be the number of interagency meetings held per month. Another possibility would be difference in the costs spent on the Joint Terrorism Task Force (JTTF) before 9/11 and the funds applied to enhance it through the creation of a fusion center after the terrorist attack.⁶⁰ This can be assessed through historical interviews, cost records, plans and agreements of commitment to the actual fusion of agencies.

MOEP indicated the importance of interoperability of communication in its overall strategy, citing specifically the transition of its emergency

operations plans to the Emergency Support Functions (ESF) framework. This format, used by the state, ensures more fluid communication because both will use the same framework and the same language.

In addition, D'Andrea and Phillips suggested measuring the degree of turnover in emergency preparedness and response organizations as a means of assessing continuity. D'Andrea raised the example of determining who participated in the fusion center in terms of the individual's experience, qualifications, time in service, etc. immediately after 9/11. As time progressed and turnover occurred, the question becomes whether that position was filled by a person of the same caliber, or rather a lower-level and less-experienced public servant. This determination would indicate a commitment to the fusion capability of the city. These types of measures could be valuable to MOEP as they devise the metrics they want to use to assess their internal processes. Paying attention to human resource issues as well as communication and coordination are important components to an organization achieving its mission.

Current Efforts in Cities Similar to Boston

The City of San Francisco

The City of San Francisco in northern California is very similar to Boston in terms of population size, multiple surrounding jurisdictions, and vulnerabilities inherent in living close to maritime water sources. A review of this city's performance measurement system was encouraged by our PAE advisor, Richard Clarke. The City of San Francisco Controller's Office maintains a database that tracks performance measures for the city and compiles data on the services the government renders to the public. The report issued by the Controller's Office includes performance results for prior fiscal years, targets and midyear projections for the current fiscal year, and targets for the next budget year.⁶¹ The goals and performance measures for the Emergency Communications Department are listed below.

*Figure 17: San Francisco's Emergency Communications Department⁶²***EMERGENCY COMMUNICATIONS****Goal 1** **Staff emergency communication center with fully-trained personnel**

- Measures**
1. Number of new dispatchers to complete training
 2. Number of new call takers to complete training
 3. Percentage of fully qualified staff maintaining continuing education requirements

Goal 2 **Respond quickly to incoming calls**

- Measures**
1. Total number of calls answered in the communication center
 2. Total number of non-emergency calls answered in the comm. center
 3. Percentage of emergency calls answered within 10 seconds

Goal 3 **Minimize abandoned calls**

- Measures**
1. Percentage of emergency calls abandoned in the communication center
 2. Percentage of non-emergency calls abandoned in the comm. center

EMERGENCY SERVICES COORDINATION**Goal 1** **Exercise emergency response capabilities**

- Measures**
1. Number of functional exercises conducted
 2. Number of tabletop exercises conducted
 3. Number of unique participants in discussion based exercises
 4. Number of unique participants in functional exercises

Goal 2 **Coordinate interagency planning**

- Measures**
1. Number of planning task force meetings
 2. Number of disaster council meetings
 3. Number of training courses
 4. Assessment of training program quality from attendee's perspective
 5. Percentage of tasks added and completed towards the Master Improvement Plan
 6. Number of outstanding tasks of the Master Improvement Plan
 7. Number of Department Emergency Operations Plans submitted
 8. Percentage of Department Emergency Operations Plans reviewed
 9. Current balance of Grant funding

Goal 3 **Promote community preparedness for emergencies**

- Measures**
1. Number of preparedness presentations made
 2. Number of brochures distributed
 3. Number of days of public education advertising

NON PROGRAM**Goal 1** **All City employees have a current performance appraisal**

- Measures**
1. Number of employees for whom performance appraisals were scheduled
 2. Number of employees for whom scheduled performance appraisals were completed

At the time this report was issued (June 2007), the San Francisco Controller's Office report includes data from the previous 3 years, as well as the targets and performance at 6 months into the current fiscal year. A complete measurement for the first goal within the Emergency Communications category is shown below.

Figure 18: Goal 1 measurement⁶³

Goal 1		Staff emergency communication center with fully-trained personnel				
Measure		1. Number of new dispatchers to complete training				
2003-2004	2004-2005	2005-2006	2006-2007	2006-2007	2006-2007	2007-2008
Actual	Actual	Actual	Target	6 mo. Actual	Projected	Target
20	10	13	22	5	13	22

Measure Definition: Hiring and training fully qualified dispatchers. Measure relates directly with department's goal to maintain "Civilianization," which is the recruitment and training of civilian personnel to answer and dispatch fire and EMS calls.

Data Collection Method: ECD's Training Unit.

FY06-07 6-month Actual and Projection: The FY 06-07 projection accounts for a lower number of academy recruits.

Data Frequency and Reporting Date: Monthly

FY07-08 Target: ECD will conduct training for 40 dispatcher recruits during FY07-08. Expected student retention of 55% for this 8238 classification.

The ability to measure current progress against past performance enables the City of San Francisco to determine with a higher degree of certainty where the government stands in terms of meeting its goals. The detailed and consistent recording of data allows the city to conduct trend analyses and determine current performance against past achievement. Furthermore, instituting a 6 month measurement allows the city to track interim progress before the year's end. This serves to indicate whether the government is on track or needs to speed up efforts to reach its goals. The specificity of San Francisco's performance measures, the inclusion of past data, and the interim 6 month measurements against targets all contribute to the measurement system's ability to assess how well the government provides services to citizens.

Richard Clarke suggested we compare the capabilities in cities that are similar to Boston in terms of population, vulnerabilities, and geographic location in order to help MOEP benchmark its own current capabilities. Comparing select measures from the City of San Francisco's performance measurement system to Clarke's Metropolitan Area Security Plan is

illuminating and provides an assessment of how a city similar to Boston is performing in the emergency preparedness arena. For example, the San Francisco government focuses on reliable and resilient communications systems. The Telecom and Information Services Department tracks what percentage of the time communication systems are up-and-running. The Mayor's emergency telephone system is up 98% of the time as recorded in 2007. The Port Department does not track any performance measurements related to security in the Office of the Controller's report. Surveys make up a significant amount of data collection. For example, the average satisfaction with airport security and average wait time in security checkpoints were key indicators in the airport measurements. In line with Clarke's security plan, San Francisco devotes much time and energy to training activities, both mock exercises and job-specific training and certifications. The San Francisco Fire Department strives to educate the public about how to respond to emergencies by tracking the number of presentations made to the citizens and the number of response pamphlets disseminated. Agencies that share in emergency response tasks have begun the process of convening to develop shared performance measures to track their progress.⁶⁴ Determining how other cities similar to Boston are ensuring preparedness and measuring performance is useful to MOEP as they move forward in developing their own internal performance measurement system.

The City of Baltimore and the State of Maryland

The City of Baltimore is well-known for developing CitiStat, a performance measurement program credited with dramatically improving city services. In fact, just four years after its inception, Baltimore's CitiStat received the prestigious Innovations in American Government Award from Harvard University and the Council for Excellence in Government.⁶⁵ The CitiStat program, "regularly reviews every aspect of Baltimore City's government – ranging from employees' use of overtime and sick leave, to trash collection and snow removal – ensuring that the city is meeting the needs of its citizens. Bimonthly meetings between agencies, the mayor, the first deputy mayor and members of his cabinet serve as a key component of CitiStat. Before the meetings, agencies are required to submit performance reports, which are compared to data from the city's 311 Call center, an independent body that manages service requests from citizens."⁶⁶ CitiStat is based on four core tenets:

1. Accurate and timely intelligence shared by all
2. Rapid deployment of resources
3. Effective tactics and strategies
4. Relentless follow-up and assessment⁶⁷

When it came to tracking homeland security preparedness, however, Mayor Martin O'Malley (1999-2007) chose a different track. CitiStat's formulaic and service-oriented approach was not conducive to measuring homeland security preparedness, which required more long-term strategy and capability planning. In an interview for this PAE, Andrew Lauand, former Homeland Security Advisor to Mayor O'Malley and current Homeland Security Advisor to now-Governor O'Malley, described the rationale behind their approach, which was later continued at the state level.

As much time as we spent doing CitiStat, we did not really stat homeland security per se. For homeland security, we had a playbook of basic operational capabilities that we thought we needed to build up.⁶⁸

This model is very similar to Clarke's Metropolitan Area Security Plan, which identifies critical preparedness priorities and the order in which cities should complete them. At the state level, Maryland officials identified twelve critical preparedness goals, and are currently in the process of developing measures and targets for each of those goals. A complete list of Maryland's twelve core homeland security goals can be found in *Maryland's Strategic Goals and Objectives for Homeland Security*.⁶⁹ Two of the goals are displayed here.

Figure 19: Example of Maryland's Core Goals for Homeland Security⁷⁰

- **Interoperable Communications**—First responders in every region in Maryland should have access to a fully digital, trunked radio system which all response partners can access in order to transmit and receive voice and data. First responders in every region should have robust CAD/RMS systems capable of coordinating dispatch data for all response partners and capable of transmitting data to systems such as WebEOC for consolidation and roll up of regional CAD data
- **HAZ MAT/Explosive Device Response**—Every metropolitan region should have a Type 1 Haz Mat team and a Type 1 bomb response team, either as one unit, or separate units, and there should be sufficient units statewide to provide a mutual aid response in any jurisdiction within a minimal amount of time. These teams should all be trained for both fire and law enforcement response.

A list of the performance targets associated with the second goal (HAZ MAT/Explosive Device Response) is provided in the figure below.

Figure 20: Targets within Maryland's Core Goal: HAZ MAT/Explosive Device Response⁷¹

Every metropolitan region in Maryland should have access to a Type 1 bomb response and HazMat team, and those units should be able to provide mutual aid within a minimal amount of time.

- Define a standard set of equipment and training for Bomb Squad and HazMat Teams in Maryland and apply that standard across the state. These teams should meet Type 1 standards, but Maryland's standards should incorporate or consider emergent technologies that provide enhanced response and render safe capabilities.
- Establish a formalized system of mutual aid to ensure every jurisdiction has access to a Type 1 bomb response and HazMat team within a determined response window.
- Key data including response times and incident types should be shared between state and local teams, and analyzed for more effective response on a regular basis.

State and Local HazMat and Bomb Teams should be trained for both fire and law enforcement response and to handle unique WMD/CBRNE incidents.

- Identify cross training needs for HazMat teams so that teams can support and effectively coordinate with all law enforcement response (e.g., crime scene, evidence collection, safety).
- Develop a cross training plan for Bomb response teams in WMD/CBRNE response.

Like our review of City of San Francisco, we wanted to compare Baltimore's preparedness goals to the actual capabilities they have achieved thus far. Lauland identified several priorities that have been largely met in Baltimore, including CCTV covering critical infrastructure, covert air monitors, specialized drills and exercises (such as Red Envelope Drills, where police are given surprise practice drills in red envelopes), and personal protective equipment such as WMD kits in the trunk of every police car. Lauland also indicated that Maryland's priorities adapt with new intelligence and information. For example, recent reports indicated that chlorine has been used in Improvised Explosive Devices (IEDs) in Iraq. In response, Maryland officials are moving to secure all potential chlorine deposits in the state.⁷²

Finally, Lauland noted that the key to CitiStat's success was not its innovative software, but rather the intense buy-in and engagement by high-level city officials.

It matters less what system you use – it's having a system. That is the real challenge. There was nothing magic about CitiStat - the magic was the engagement and the accountability. The Mayor went to meetings every week. You could have picked [another system] up, if you stuck to it and had executive engagement. CitiStat was never about the electronics.⁷³

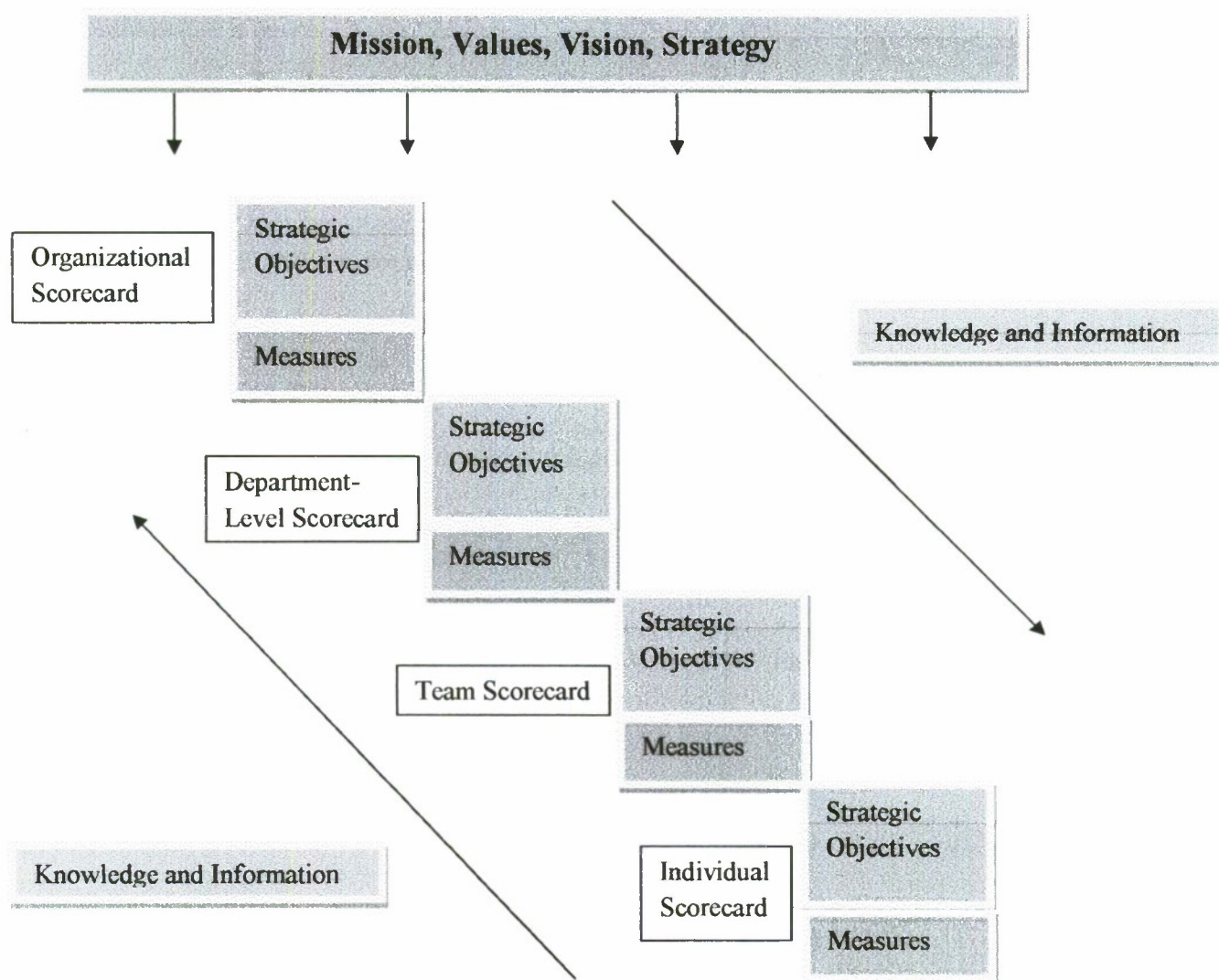
A further discussion of high-level agency engagement with respect to the Balanced Scorecard can be found in the ensuing Implementation Plan.

Implementation Plan: The Balanced Scorecard and MOEP

If the Mayor's Office of Emergency Preparedness implements the Balanced Scorecard provided in this PAE, certain components are important to the implementation process that will ensure a successful execution of the performance measurement system. These important points include: cascading the scorecard to create alignment at every level of the organization, sharing the scorecard with stakeholders with the adequate security clearance to ensure accountability to the scorecard, and adhering to implementation principles that are important in integrating the scorecard into the organization's measurement processes.

Developing cascaded scorecards at each level of the organization to ensure alignment with overall mission

Cascading the Balanced Scorecard to lower levels within an organization refers to devising scorecards at each level of the organization in an aligned fashion that ensures all processes within the agency support the overall mission. In the public sector, cascading is a necessity rather than an alternative, as many different entities and people are involved in achieving results.⁷⁴ The goal of cascading is to provide all groups within the organization the opportunity to demonstrate how their specific actions contribute to overall success. The cascading process begins with the overall organizational-wide scorecard, and then additional scorecards are developed at increasingly lower levels. For example, additional scorecards may be devised at the department-level, the team level, and finally the individual level. Figure 21 (below) depicts this process.

Figure 21: Cascaded Balanced Scorecard Model⁷⁵

Each cascaded scorecard links back to the organizational-wide scorecard; this process ensures that employees at the every level are working toward achieving the overall mission. It is important to verify that alignment is achieved between scorecards at each level and that the measures and objectives at lower levels do, in fact, contribute toward the overarching strategy.

The Mayor's Office of Emergency Preparedness should devise Balanced Scorecards at all levels of its organization, possibly around functional or jurisdictional areas, to ensure all work contributes to MOEP's overall vision of a Metro-Boston Homeland Security region with strengthened capabilities to ensure its safety and security. This can be achieved by

convening jurisdictional leaders together so that MOEP leadership can lead a strategy planning session similar to the one we conducted with Donald McGough and Atyia Martin. This iterated procedure will identify relevant objectives, measures, targets and initiatives to align processes more closely with MOEP's overall vision at each level of the organization. The interview questions used with MOEP leadership can be found in Appendix B. In addition, there are many software programs that assist in generating cascaded balanced scorecards and tracking the organization's performance against the measures, which are available through an online search. Only by cascading the Balanced Scorecard throughout the organization will MOEP be able to truly streamline and align all processes at each level within its organization with its mission.

An example of a cascaded scorecard for the Boston Emergency Operations Center can be found on the next page.

Cascaded Balanced Scorecard Example for Boston's Emergency Operations Center (EOC)

Customer			
Objectives		Measures	Targets Initiatives
"To achieve our vision, how do we serve our customers?"		EOC staff preparedness	<ul style="list-style-type: none"> • Number of successful training exercises • Qualifications/completed education of individual staff
		Successful communications during an emergency	<ul style="list-style-type: none"> • Level of successful contact with response entities • Percentage responders acting consistent with message • Level of observance of the chain of command • Central location designated and equipped with capabilities
		Interoperable communications	<ul style="list-style-type: none"> • Level of synergy in the response • Number of technology failures that prevented communication
		Responder capabilities	<ul style="list-style-type: none"> • Number of responders who could not communicate with EOC • The time required to reach responders
		State/Federal coordination	<ul style="list-style-type: none"> • Integrated plans • Use of the same language during communication

Internal Processes			
Objectives		Measures	Targets Initiatives
"To continue to add value, what processes must we excel at?"		Staff EOC with competent officials	<ul style="list-style-type: none"> • Number training exercises • Job qualifications • Authority in job
		Identify risks, communicate to stakeholders	<ul style="list-style-type: none"> • Use valid methodology and plans • Percent officials reached

Learning and Growth			
Objectives		Measures	Targets Initiatives
"How will we sustain our ability to change and improve?"		Strengthen Communication	<ul style="list-style-type: none"> • Training/certification • Use current technology across all entities
		Update response plans	<ul style="list-style-type: none"> • Using current plans? • Disseminate plans to all entities

Financial			
Objectives		Measures	Targets Initiatives
"What financial goals must we achieve to realize our strategic objectives?"		Fiscal responsibility	<ul style="list-style-type: none"> • Expenditures made support overall strategy • Successful audits
		Investments result in enhanced capabilities	<ul style="list-style-type: none"> • Capabilities are enhanced • Stakeholders see the value in enhanced capabilities • Technology enhanced in cost-effective manner

Ensuring the organization is accountable to the goals laid out in the Balanced Scorecard

Accountability measures are an essential component to the successful implementation of the Balanced Scorecard in an organization. Sharing an entity's Balanced Scorecard with stakeholders on a quarterly basis is a powerful way to ensure the agency is, in fact, making progress toward achieving its objectives. David Bibo, a prior employee of MOEP, addressed the issue of accountability in an interview for this PAE.

The best way for BSC to become a relevant tool for MOEP is for them to feel like someone else is holding them accountable to it. I'd recommend suggesting to them that, once it's implemented, they share the scorecard on a quarterly basis with the regional stakeholders so everyone knows where they stand. Unless it's shared amongst the customers and stakeholders, it will "sit on a shelf" and not get the attention it deserves.⁷⁶

It is highly recommended that MOEP ensure accountability by sharing its scorecard and performance with stakeholders. It is not expected nor advised that MOEP release the sensitive information that is included in the targets and initiatives columns of the scorecard with stakeholders that do not have adequate security credentials, but rather that the organization share its progress with a group of stakeholders that do have adequate security clearance.

Key implementation principles

The following implementation principles provide helpful guidelines when an organization puts the balanced scorecard into practice: (1) cascaded scorecards should be content-specific to represent the unique characteristics of each group, (2) terminology must be consistent throughout organization, (3) limit the number of performance measures to only the critical few, (4) personal performance objectives should be linked to the Balanced Scorecard, (5) include Balanced Scorecard understanding in key leadership competencies, (6) first-level managers are vital to the acceptance of the scorecard, (7) share learning as a team, a possible distribution method being the organization's Intranet,⁷⁷ and (8) systematize feedback because it is an essential component to generating momentum within an organization.⁷⁸ Based on the conversation with Utah State government officials, we recommend that MOEP consider allowing employees to develop their own performance measures. In their experience, this drastically increased employee buy-in and encouraged employees to set higher goals and ardently work to achieve them. MOEP might also follow Utah's example of changing the traditional Balanced Scorecard perspectives (Customer, Financial, etc.) to functional areas

(Prepare, Prevent and Respond). Furthermore, MOEP should strongly consider linking scorecard objectives to its budget. Based on Baltimore's experience, high-level buy-in is also critical to a successful performance measurement system.

How the Balanced Scorecard is implemented in an organization, which includes incorporating effective accountability measures, will facilitate the success of the performance measurement system in aligning all processes to an entity's overall mission and assessing progress toward achieving that mission.

Conclusion

After conducting this review, we recommend the following to MOEP as they move forward in developing a sustainable performance measurement system for their organization.

- 1. Implement a Balanced Scorecard approach**
- 2. Focus on defining and executing critical priorities using Richard A. Clarke's Metropolitan Area Security Plan**
- 3. Draw from DHS-style measures, but also focus more on creating forward-looking measures**
- 4. Undergo the Emergency Management Accreditation Program within 3 years**

By building and deploying a Balanced Scorecard measurement system, MOEP will be able to track its progress on key issues, ensure that its budget is linked to its overall strategy, and meet critical needs first. Through a robust Balanced Scorecard system with cascaded scorecards for lower-level parts of the agency, MOEP can become a cutting-edge performance management leader within the City of Boston, and perhaps spur other city agencies to follow their lead.

Appendix A.

We interviewed the following individuals for this PAE:

- Donald McGough, Director, MOEP
- Atyia Martin, Regional Planner, MOEP
- Professor Richard Clarke, Harvard Kennedy School of Government
- Professor Robert Behn, Harvard Kennedy School of Government
- Professor Arnold Howitt, Harvard Kennedy School of Government
- Heather Wilson, U.S. Representative, State of New Mexico
- Dr. J. Wiley Davidson, Program Director, Homeland Security Programs, Threat Reduction Directorate at Los Alamos National Laboratory
- Dr. Babs Marrone, Project Leader and Principal Investigator in the Bioscience Division at Los Alamos National Laboratory
- Chris Ortega, Los Alamos County Utilities Manager
- Steve Yarbrow, Group Leader in IAT-1, International and Applied Technology Division
- Jeff Phillips, former director of New Mexico Emergency Operations
- Jay Hone, U.S. Air Force Emergency Preparedness Liaison Officer (EPLO)
- Brian D'Andrea, U.S. Navy EPLO
- Catherine Holdeman, Assistant City Manager, Wichita, Kansas
- David Bibb, U.S. Secret Service and former Boston MOEP employee working homeland security issues under
- Mike Hansen, Director of Strategy and Management for the Utah Governor's Office
- Amy Lightfoot, Special Programs Director at the Utah Department of Public Safety
- R.P. Eddy, CEO Ergo and Senior Fellow for Counterterrorism at the Manhattan Institute
- Andrew A. Lauland, Governor's Homeland Security Advisor, State of Maryland

Appendix B.**Balanced Scorecard Interview Questionnaire⁷⁹*****Purpose of the Organization***

1. What is the mission of your organization? MOEP's Mission is to enhance the City of Boston and Metro-Boston Homeland Security Region's capacity to prevent, protect against, respond to, and recover from major emergencies.
2. What is the vision of your organization?: A vision statement provides a word picture of what the organization intends ultimately to become – which may be 5, 10, or 15 years in the future.
3. What are the values of your organization?

Strategy

“Your strategy is the common thread that weaves through the Scorecard tying the disparate elements of customers, processes, employees, and financial stakeholders into one coherent whole.” To craft a strategy, we begin with a SWOT analysis, which looks at strengths, weaknesses, opportunities, and threats (graphic pg. 173). Utilizing this information, we will craft a one-page “Strategy Map” that graphically depicts your organization’s performance objectives. A Balanced Scorecard complements the strategy map by once again outlining the objectives, but also providing measures, targets, and initiatives used to gauge success on the objectives.

1. What are MOEP’s strengths?
2. What are MOEP’s weaknesses?
3. What opportunities are present for your organization, the pursuit of which will lead you to your mission?
4. What threats do you face that may endanger the pursuit of your mission?
5. Analysis: Thinking about the responses to the four questions above, what are your organization’s strategic issues? Strategic issues are defined as, “fundamental policy questions or critical challenges that affect an organization’s mandate, mission and values; product or service level and mix, clients, users or payers; or cost, financing, organization, or management.”
6. Given these strategic issues, what are your strategic priorities for each of these perspectives: Customer, Financial, Internal Process, Employee Learning and Growth?

Balanced Scorecard

NOTE: Performance measures should include a mixture of input, output, and outcome variables. In addition, there should be a mixture of lag indicators (things that have already happened; and lead indicators, which might signal milestones in the future – these measure intermediate processes and activities).

NOTE II: The best performance measures provide direction, align employees, improve decision-making, and serve as a basis for resource allocation decisions.

Customer Perspective

1. Who are your customers or stakeholders? [We have identified three: Boston-area citizens, the Mayor's Office of Boston, and the U.S. Department of Homeland Security]
2. What are your objectives for each segment of your customers? [Up to 2 for each segment]
3. How might you measure if you are achieving your objectives?
4. What is the ideal target for each of those measures?
5. Are you currently undertaking any initiatives to meet these targets? If so, could they be enhanced? If not, are there initiatives that would help you reach these targets?

Internal Perspective [i.e. innovation/operations/efficiency]

1. To continue adding value for your customers and clients, what processes must you excel at? [Up to 2]
2. After analyzing current trends, which processes might you be expected to develop and excel at in the foreseeable future? [Up to 2]
3. How might you measure if you are achieving these goals? [possibilities include quality, innovation, partnering] NOTE: Measures in the Internal Process perspective should flow directly from your choices in the customer perspective
4. What is the ideal target for each of those measures?
5. Are you currently undertaking any initiatives to meet these targets? If so, could they be enhanced? If not, are there initiatives that would help you reach these targets?

Learning and Growth Perspective

1. Which skills and competencies will be required in the years ahead? [Up to 2]
2. Do your employees have access to the training they need to help you achieve your customer outcomes?
3. Is your organizational climate conducive to success? Do you have a strong culture and alignment of goals throughout?
4. How might you measure if you are achieving these goals? [examples include: training by level, retention, personal development plan creation, employee satisfaction, alignment]
5. What is the ideal target for each of those measures?
6. Are you currently undertaking any initiatives to meet these targets? If so, could they be enhanced? If not, are there initiatives that would help you reach these targets?

Financial Perspective

1. What financial goals need to be achieved to realize your strategic themes and objectives?
[Up to 2]
2. How might you measure if you are achieving these goals? [possibilities include: staying within budget, lowering expenses, increasing return on investment, increasing cash flow]
3. What is the ideal target for each of those measures?
4. Are you currently undertaking any initiatives to meet these targets? If so, could they be enhanced? If not, are there initiatives that would help you reach these targets?

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³ Ibid.

⁴ Robert Behn, "On why citizens need to establish The Performance-Target Ethic," Vol. 6, no. 3, (2008), <http://www.hks.harvard.edu/thebehnreport/November2008.pdf>.

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⁹ Ibid.

¹⁰ Richard Clarke and Rand Beers, *The Forgotten Homeland* (New York: The Century Foundation Press, 2006), 12.

¹¹ U.S. Department of Homeland Security, "Interim National Preparedness Goal, Homeland Security Presidential Directive 8: *National Preparedness*," p. 17, http://www.ojp.usdoj.gov/odp/docs/InterimNationalPreparednessGoal_03-31-05_1.pdf.

¹² Clarke and Beers, *The Forgotten Homeland*, 15.

¹³ McGough interview.

¹⁴ City of Boston, "Boston About Results—Performance Goals," p. 99, http://www.cityofboston.gov/TridionImages/06_Budg_Per_Go_tcm1-835.pdf.

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²⁰ Ibid., 171.

²¹ Ibid., 39.

²² Ibid., 189.

²³ Ibid., 204.

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²⁶ Niven, *Balanced Scorecard Step-By-Step For Government and Nonprofit Agencies*, 207-8.

²⁷ Mike Hansen (Director of Strategy and Management, Utah Governor's Office of Planning and Budget, State of Utah), in discussion with Amy Rosenband, March 2009.

²⁸ Amy Lightfoot (Special Programs Director, Utah Department of Public Safety), in discussion with Amy Rosenband, March 2009.

²⁹ Hansen, interview.

³⁰ Niven, *Balanced Scorecard Step-By-Step For Government and Nonprofit Agencies*, 277.

³¹ Niven, *Balanced Scorecard Step-By-Step For Government and Nonprofit Agencies*, 282-3.

³² Ibid., 277.

³³ Richard Clarke, *Your Government Failed You: Breaking the Cycle of National Security Disasters* (New York: Ecco, 2008), 229.

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⁷⁵ Ibid., 229.

⁷⁶ David Bibo (former employee of Mayor's Office of Emergency Preparedness, Boston), in discussion with the authors, March 3, 2009.

⁷⁷ Niven, *Balanced Scorecard Step-By-Step For Government and Nonprofit Agencies*, 231-2.

⁷⁸ Nair, *Essentials of Balanced Scorecard*, 144.

⁷⁹ Many of these questions are taken or modified from Mohan Nair, *Essentials of Balanced Scorecard*, 2004 and Peter Niven, *Balanced Scorecard Step-By-Step for Government and Nonprofit Agencies*, 2003.

natural or man-made.”¹ The Director of MOEP also stated the vision of the organization in the context of the next 5-10 years as: “A Metro-Boston homeland security region with strengthened capabilities to ensure its safety and security.” The values of MOEP, also stated by the Director, include transparency, utilization of best practices, sustained competencies of preparedness capabilities, regional collaboration, all-hazards based preparedness, and best practices adoption.² MOEP is responsible for both the City of Boston and the Metro-Boston Homeland Security Region (MBHSR), managing grant funding and strengthening preparedness programs. Boston receives roughly 95% of its budget from the U.S. Department of Homeland Security in order to improve the city's ability to prepare for and respond to natural disasters and terrorist threats.³ MOEP's aim for this PAE is to acquire performance measurement methods and tools to assess the effectiveness of DHS-funded security initiatives and their impact on Boston's emergency preparedness and response capabilities.

The need for performance measurement in government

A central responsibility of government is providing services to citizens. It is essential that governments at every level be able to measure their performance and justify their use of taxpayer dollars. After performance measures made waves in the private sector, experts began to see utility in the public sector. In his article, “The Performance-Target Ethic”, Harvard Kennedy School Professor Robert Behn addresses how citizens can determine whether their governments are performing well.⁴ Behn asserts that governments often attempt to communicate progress to citizens by posting statistics on websites, but often this amounts to little more than a plethora of inaccessible and non-essential information that fails to give the citizen a clear understanding of government performance. Behn advocates a different approach. To evaluate the performance of any government, Behn argues that citizens need to answer the compared-with-what question: “The evaluation of a public agency involves a comparison. If you decide that an agency is outstanding, you do so because it is better than your basis of comparison. Thus, every evaluation begins with the key question: ‘Compared with what?’”⁵ A government can address the compared-with-what question by establishing performance targets—specific goals to be accomplished by an organization by a specific date.⁶ Possible targets to answer the question of comparison include: (1) the agency's past performance, (2) the performance of similar agencies in similar jurisdictions, and (3) the agency's own performance target.⁷

Behn also addresses the value and difficulty in setting performance targets for government agencies in, “On the Executive Responsibility to set Performance Targets”. He illuminates the inherent barriers an organization faces in developing targets and making them public: “Putting

a number and a date in the same sentence is a commitment...the more public the leaders are in their commitment to producing X by Y, the more that the people in their organization will understand that the performance targets are serious...yet setting such targets is the easiest way to invite scrutiny and criticism.”⁸ Despite these impediments, Behn asserts that, “citizens need to establish the performance-target ethic: ‘We expect our elected and appointed executives to establish specific, meaningful performance targets.’ Then citizens will have a basis on which to judge whether their government is performing well.”⁹ Specific and accurate targets are essential in performance measurement, and even though publically committing to them can be challenging for city officials, citizens need to demand that the targets be established and made transparent. By doing this, citizens will be able to assess government processes in a more accurate, accountable, transparent and accessible manner.

The need for emergency preparedness performance measurement at the local level

While the U.S. Department of Homeland Security tracks performance at a national level, it has provided little guidance to state and local governments on how to systematically and appropriately measure the success of DHS-funded initiatives at the local level. Nonetheless, DHS has indicated that local governments should be tracking such progress, and will be held accountable for their results. To make matters worse, Congress often directs homeland security funds toward superfluous or “pet” projects, limiting local progress toward achieving minimum preparedness goals. This section details the rationale for developing a local performance measurement system, as well as a method to help local governments begin to prioritize critical needs.

Rationale for emergency preparedness performance measurement at the local level

In the immediate aftermath of the tragedy of 9/11, Congress and the White House moved quickly to direct more funding toward state and local homeland security efforts. Fearing that local governments would be resistant to specific guidelines, Congress provided much of the funding through block grants with vague requirements, assuming that the localities would know how to spend the money to reach their preparedness goals.¹⁰ As the National Preparedness Goal Homeland Security Presidential Directive 8 asserts,

Senior officials at each level of government are ultimately accountable to their citizens for assessing preparedness for their respective jurisdictions. They are best positioned to

understand that assessment data may not be all-encompassing and that other factors weigh into the preparedness equation. They will retain the authority, responsibility, and discretion to provide additional evidence or information to the overall assessment for their respective entity. This preserves and respects the flexibility of Federal, State, local, and tribal authorities, who are most familiar with and have the best insight into their homeland security needs, while ensuring accountability for everyone's role in national preparedness.¹¹

This ambiguity created significant difficulties for state and local governments in choosing how to allocate funds and tracking the impact of their efforts. As the Century Foundation reported in *The Forgotten Homeland*, "While billions of dollars have been spent, the lack of explicit and detailed national goals for local governments to achieve has made it impossible to know how close we have come to the minimum defensive and responsive capabilities we need."¹² MOEP Director Donald McGough echoed this sentiment, providing one example about emergency cots. While MOEP purchased a certain number of cots for the Boston metropolitan area with DHS funds, Director McGough lacks the tools needed to measure the impact, benefit, or effectiveness of this investment, or to determine whether the cots translate into a preparedness capability.¹³ At the same time, he is held accountable by the Mayor's Office in Boston, the State of Massachusetts, DHS, and other stakeholders to demonstrate effective use of DHS dollars and progress toward improved security.

Current performance measurement efforts in the City of Boston

The City of Boston strives to provide the highest level of services to its citizens. Mayor Menino's administration is dedicated to improving performance, responsiveness and customer satisfaction across all city departments. City leaders recognize the importance of timely, reliable and consistent information, and thus launched the performance measurement system *Boston About Results* in 2006. Integral to this system is a city-wide, web-based performance measurement application which aims to closely align strategy with performance measures, improve coordination of citywide initiatives, and develop performance scorecards and indicators of success by department, program and strategy.¹⁴ *Boston About Results* was designed to inform program managers, city leaders and citizens regarding the levels of services and outputs being rendered to the public. It is guided by the following performance principles: (1) Improving Accountability and Transparency, (2) Focusing on the Mission, (3) Strengthening Management, and (4) Strategic Resource Planning.¹⁵

One specific way the City of Boston desires to increase transparency is by placing key performance results on the website, as well as fostering communication across departments about the levels and types of services that are being administered to citizens. The measures to assess the performance of city programs are intended to tie directly to the overall mission and goals of the city. Status indicators were developed by city leaders to with the aim of facilitating managers tracking and reviewing progress against stated targets. Below is an example of status indicators used in *Boston About Results*.

Figure 1: Status indicators for managers

Status Indicators	
■	Performance meets or exceeds target
▽	Performance is slightly below target
●	Measure is trending far below target, needs attention
○	Measure data missing or no target created

These indicators are applied to programs to indicate the degree to which targets are being met and identify those areas that require remedial attention. The strategic resources planning system, to which *Boston About Results* is an integral part, provides a baseline of services rendered by department. Below is the Sustainability and Security scorecard portion for FY08.

Figure 2: Sustainability and Security Performance Goals FY08

Sustainability & Security		
Increase the Capacity of Community Policing	Clearance rate for violent crimes	5% increase
	Homicides	5% decrease
	Shootings	10% decrease
	Youth & Families referred for service by street workers	1400
Coordinate Capital and Operational Funds	% of roadway miles resurfaced	4%
	Street trees planted	500
Protect Homeowners	Affordable housing units preserved through foreclosure prevention	147
	Homebuyers receiving foreclosure prevention technical assistance	1532

Finally, budget accountability, where financial and operational performance is monitored against the established budget plan and expected service levels, as well as the Mayor's 24 hour Constituent Service Hotline, provide measures and an assessment of performance that reflects the level of services rendered to Bostonians, which in turn measures the degree to which the city is meeting its mission.

While city leadership intended for *Boston About Results* to comprehensively measure the government's service output, the system has not entirely succeeded yet. Critics address the performance measurement system and contend that so far, it has not met its stated objectives. As the Boston Herald pointed out,






Other data also raised questions. As for the Fire Department, the mayor's Boston About Results site brags the average number of firefighters absent due to injury is hovering at an average of 41 jakes. Payroll records obtained by the Herald show the city paid out \$14.7 million in "injured" pay last year to some 630 firefighters.

In the Police Department, the city paid out \$7.4 million last year in injury pay. As reported in the Herald last week, police paid out \$47.8 million last year in overtime - a statistic not listed on the mayor's About Results report.¹⁶

Currently, MOEP performance is not measured or included in *Boston About Results*. While MOEP may ultimately be required to participate in *Boston About Results*, the agency still lacks the internal mechanism to measure its activities and the effectiveness of DHS-funded initiatives. In an interview for this PAE, MOEP Regional Planner Atyia Martin indicated that having a performance measurement system such as the Balanced Scorecard would help MOEP begin to contribute monthly performance reports to *Boston About Results*.¹⁷

Recommendation 1: The Balanced Scorecard

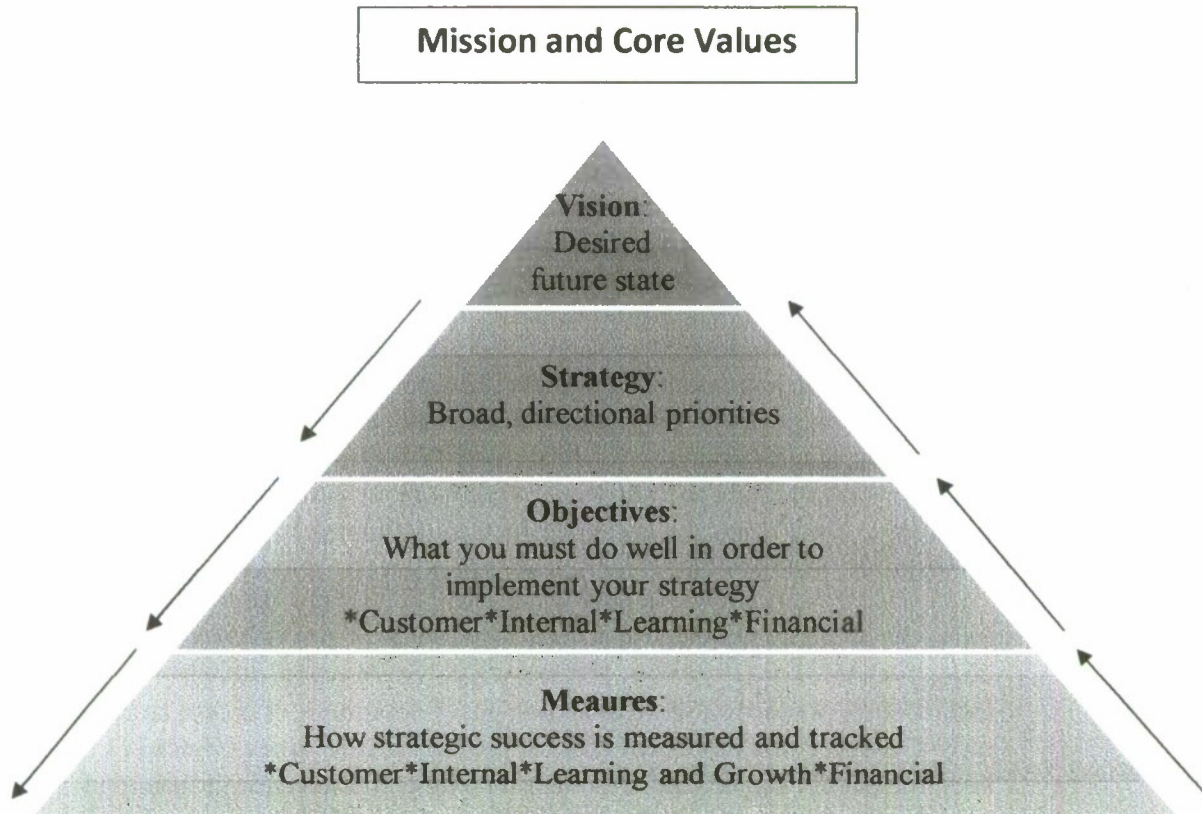
The Balanced Scorecard successfully met each of the evaluation criteria used in this PAE.

SYSTEMS AND CRITERIA	Simple format	Objective measurement	Forward-looking measurement	More than mere checklists	Inexpensive
Balanced Scorecard					

The Balanced Scorecard method is a holistic approach that ties the organization's objectives, measures, and targets to their overall vision and strategy. Developed in the 1990s by Robert Kaplan and David Norton¹⁸, the Balanced Scorecard made waves in the private sector, replacing simple financial indicators with an organization-wide system of measurement. Today, the Balanced Scorecard is used by close to half of Fortune 1000 organizations and is gaining momentum in the non-profit and public sector arenas.¹⁹

Figure 3 (below) depicts the interrelation between measures, objectives, strategy and the vision of an organization. The organization's vision determines its strategy, objectives and performance measures. The reverse relationship—namely measures building toward a vision—is also evident.

Figure 3: Illustration of the purpose of the Balanced Scorecard²⁰



The benefits of the Balanced Scorecard are numerous. By using the Balanced Scorecard, leaders are able to communicate their overall vision and strategy to both employees and external stakeholders who might otherwise have only partial information. This is of particular use to lower-level employees because they can see how their role fits into the “big picture” strategy of the organization. Managers, in turn, can use the Balanced Scorecard to ensure that investments are tied to their core mission, and that employees are getting the training they need to move the organization forward. Some governments find it helpful to link their Balanced Scorecard directly to their budget, to be able to show that every expense builds toward the organization’s ultimate goals.

In *Balanced Scorecard: Step-By-Step for Government and Nonprofit Agencies*, Paul Niven identifies several additional benefits of the scorecard, including long-term planning, accountability and transparency, attracting scarce resources, focusing the organization’s mission, driving change, and inspiring trust.²¹ The Balanced Scorecard serves as a measurement system, a strategic management system, and a communication tool.

In general, Balanced Scorecards include four perspectives: financial, customer, learning and growth, and internal processes. In the private sector, the financial perspective receives top billing, as the organization's success is tied to its bottom line. In the non-profit and public sectors, however, experts recommend that the Balanced Scorecard be modified to show the customer perspective as the leading perspective. Another change that must occur when applying the Balanced Scorecard to the public sector is that the "Customer" perspective may include several distinct sets of customers – including citizens, higher governmental authorities, and other stakeholders.

In developing a Balanced Scorecard, the organization must first derive its mission, vision, and values. This sets the stage for the organization to build its strategy. Typically, strategy building sessions involve a SWOT assessment, which analyzes the organization's strengths, weaknesses, opportunities to reach their strategic goals, and threats to achieving those outcomes. This helps the organization define their strategic issues and construct a "Strategy Map," which is defined in the next section.

Once the organization has identified its strategy, it can better assign objectives to each of the four Balanced Scorecard perspectives. For the Balanced Scorecard to serve as a high-level document, it is best to have only a few key objectives for each of the four areas. Once objectives have been identified, the organization can then assign measures, targets, and new initiatives to address any target shortfalls. In developing performance measures, experts recommend a mix of lead indicators, which measure intermediate processes and might indicate milestones in the future, and lag indicators, which look back at things that have already happened.²² In addition, as Niven states, "effective metrics provide direction, align employees, improve decision-making, and serve as a basis for resource allocation decisions."²³

In a January 2009 meeting, we took the MOEP Director Donald McGough and MOEP Regional Planner Atyia Martin through the exercise of identifying the organization's vision, strategy, and objectives for each balanced scorecard perspective. From this, we developed a Balanced Scorecard for the organization, shown on the following pages. While we were able to identify the objectives and initial performance measures for each of the four perspectives, the target and initiatives information remains classified, and will be filled in by MOEP at a later date.

*Strategy Maps*²⁴

A strategy map is a visual representation of how an organization intends to create value for its customers, stakeholders, employees, and citizens. Strategy maps represent intricate relationships among all key perspectives

that are used in the Balanced Scorecard—financial, customer, learning and growth, and internal processes. It is vital for an organization to understand the connected relationships that exist between objectives and operational measures across each of the four perspectives. Cause and effect are illustrated via arrows to represent the network of influences and dependencies to achieving one's strategy.²⁵ Strategy maps show employees at every level how their actions contribute toward the organization achieving its mission.

Limitations of the Balanced Scorecard

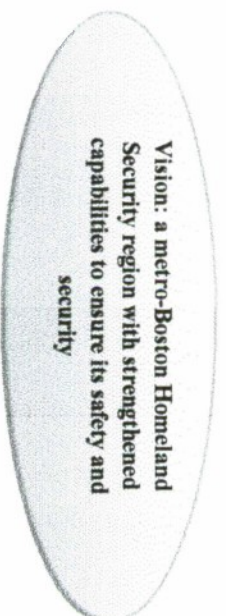
Niven identified "Eleven Deadly Sins of Balanced Scorecard," which fall into three categories: people-related, process-related, and technology-related. In general, the barriers to a successful Balanced Scorecard system result from poor managerial buy-in, utilizing quick fixes instead of long-term strategy, and failing to properly educate employees about their role in the scorecard process. The tools for avoiding some of these pitfalls can be found in the Balanced Scorecard Implementation Plan section of this PAE.

*Figure 4: Niven's "Eleven Deadly Sins of Balanced Scorecard"*²⁶

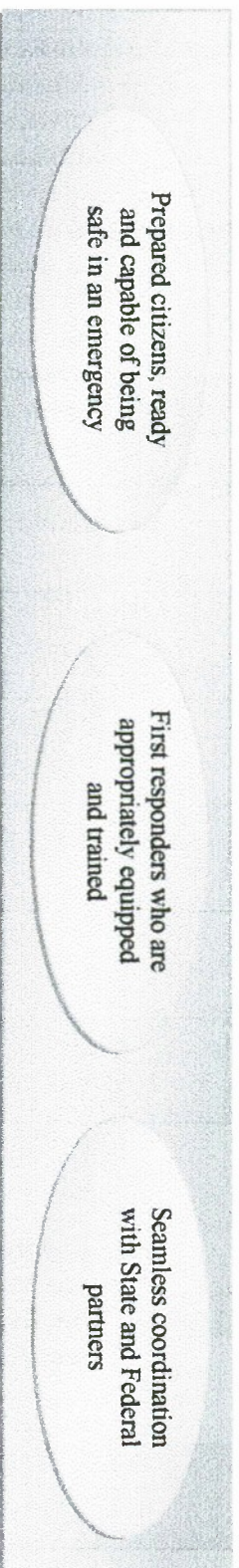
1. Taking the time to gather relevant data (a technology and process challenge)
2. Not making BSC a critical part of management process (a process challenge)
3. Stopping the education of users and managers (a people challenge)
4. Looking for the Aha! instead of the "I knew it!" (a process challenge)
5. Managing understanding and support (a people challenge)
6. Not fighting the freeloaders who resist change (a people challenge)
7. Searching for push-button solutions (a technological challenge)
8. Expecting the design to freeze (a technology challenge)
9. Assuming no hidden costs (a resource challenge)
10. Managing from the executive suite (a people management challenge)
11. Forgetting the values, vision, and mission (a process challenge)

Examples of an MOEP Strategy Map and a top-level Balanced Scorecard are included in the following two pages. If MOEP decides to implement the Balanced Scorecard, these templates can be used to begin the scorecard process.

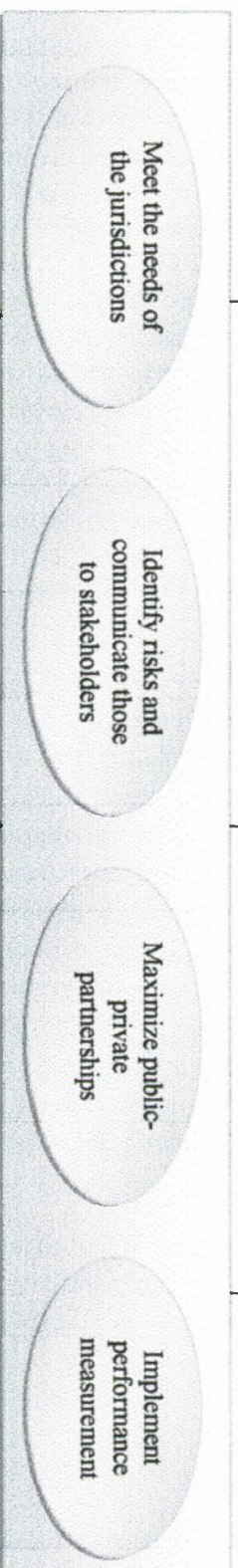
MOEP STRATEGY MAP



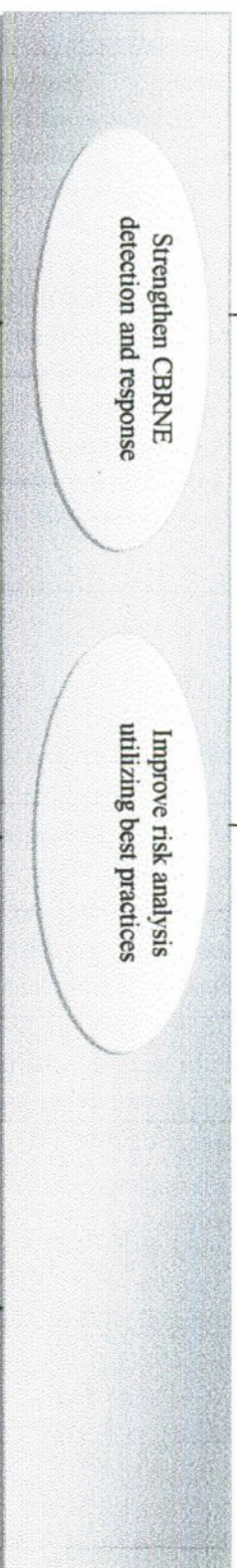
CUSTOMER PERSPECTIVE



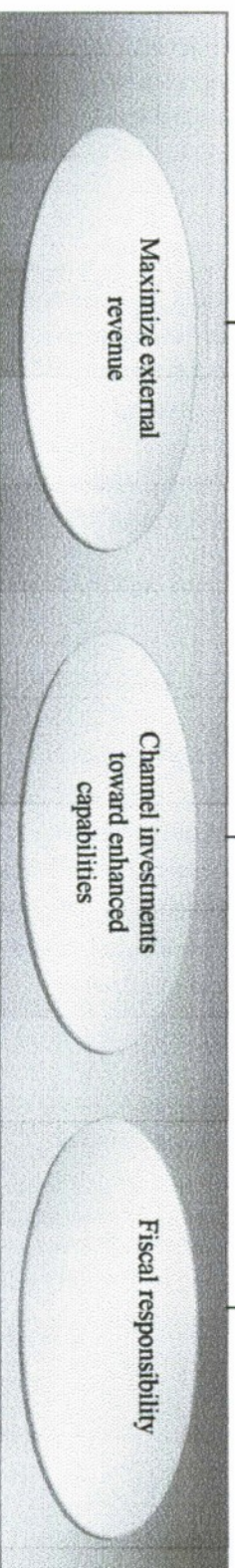
INTERNAL PROCESS PERSPECTIVE



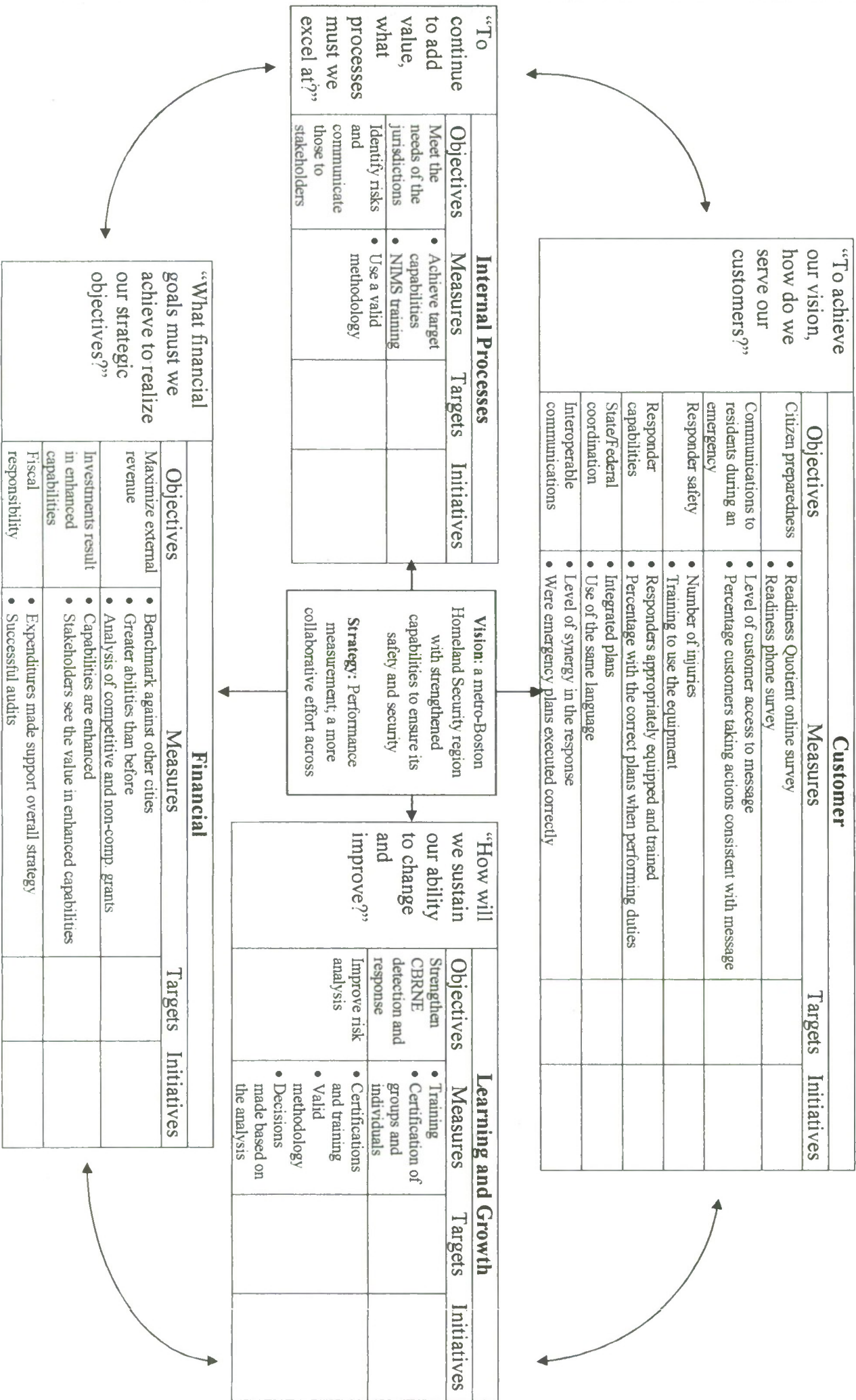
LEARNING AND GROWTH PERSPECTIVE



FINANCIAL PERSPECTIVE



Measuring Boston's Security Investment



The Balanced Scorecard in practice

Utah State government

The State of Utah has long been a leader on performance measurement. In fact, in 2008, Utah moved to the head of the pack and gained the title of best-managed state by the Pew Center on the States. According to Michael Hansen, Director of Strategy and Management for the Utah Governor's Office of Planning and Budget, this title was given in part because of Utah's fiscal conservativeness, but more for their use of the Balanced Scorecard, which links strategy to budgeting.

The most innovative part of Utah's Balanced Scorecard approach is that the Governor's Office of Planning and Budget asks all employees to come up with performance metrics and targets for themselves, rather than handing these metrics down from the top. Hansen argued that this has significantly increased buy-in to the Balanced Scorecard program, and has led employees to set greater goals for themselves.

[In Utah we are] trying to have the Balanced Scorecard grow organically, and we want individuals to develop their own measures. People are setting higher goals and goals that make more sense, rather than arbitrary goals. All the way down to the lowest level people are setting their own goals. One of the things the Balanced Scorecard does is it acts as a mediating entity – the employee can't wait for the review. The real big thing it does, the endgame of the scorecard, is a change in behavior.²⁷

This move to have individual employees define their own metrics, however, was not Utah's original plan. In fact, Utah's Governor initially directed his cabinet members to implement the Balanced Scorecard top-down. After an initial burst of enthusiasm, however, most employees soon grew to resent the metrics that were imposed on them. As time went on, officials began to let employees develop their own measures, which led to far greater success.

Another innovation within Utah's Balanced Scorecard effort is to allow agencies to come up with their own scorecard perspectives, rather than adhering to the traditional four perspectives: customer, financial, internal processes, and learning and growth. As Amy Lightfoot, Special Programs Director for the Utah Department of Public Safety described, this can help managers and employees better understand the scorecard process, and how their duties can translate into measures and goals.

Initially, I tried to have the divisions break [the Balanced Scorecard] out on internal business processes, and the

categories that are traditional in Balanced Scorecard but we ran into a lot of semantic issues. It was a hang-up for people because no one would agree what an external customer was or an internal customer. So I said forget about that – we went more based on strategy. What I found was when we did that, we still had the measures and we could still rearrange it into the Balanced Scorecard categories. ²⁸

Instead of using the traditional Balanced Scorecard categories, Utah Department of Public Safety's Homeland Security Emergency Management Division categorizes its Balanced Scorecard into four sections: Emergency Preparedness, Emergency Response, Emergency Recovery, and Emergency Mitigation (shown below). Their experience might help inform MOEP planners as they move forward in adapting a Balanced Scorecard system for the Metro-Boston area.

Utah Department of Public Safety -- Homeland Security Emergency Management Division

Mission Statement: Provide a safe and secure environment for all people in Utah through preparedness, response and recovery.

DRAFT

Division	Metric	Status	Trend	Target	Current	Previous	Frequency	Metric Definition
Emergency Preparedness -- planning, local agency interaction, hands-on training and education								
HLS-EM	State agency Continuity of Operation Plans	1	➔	100.0%	100.0%	100.0%	Quarterly	% of executive, legislative and judicial branches of state government that have a Continuity of Operations Plan developed, in place, and on file with the Homeland Security Emergency Management Division.
HLS-EM	Emergency Management Accreditation Program compliance	1	➔	100.0%	100.0%	100.0%	Monthly	# of compliant standards and elements/Total # of standards and elements. There is a total of 20 standards and 58 accompanying elements.
HLS-EM	In-state homeland security regions (for counties)	1	➔	100.0%	N/A	N/A	Quarterly	% of counties organized into seven functional in-state homeland security regions to address emergency management needs beyond the local level.
HLS-EM	Customer satisfaction survey (local agencies)	1	➔	4.10	3.74	3.56	Annually	Mean score on scale of 1 to 5. Current=January 2008.
HLS-EM	72-hour emergency kits	2	⬇	85.0%	75.0%	--	Annually	% of Utah families that have a 72-hour emergency kit. Survey conducted by Dan Jones & Associates, July 2008.
HLS-EM	Utah family emergency plans	1	⬇	85.0%	78.0%	--	Annually	% of Utah families that have a complete or partial emergency plan in place. Survey conducted by Dan Jones & Associates, July 2008.
Emergency Response -- efficiently and effectively respond to emergency events								
HLS-EM	Functional Emergency Operations Center (EOC)							
	State Emergency Response Team (SERT) notification	1	➔	100.0%	N/A	N/A	Quarterly	% of SERT members who responded to notifications through Dial Logic.
	State Emergency Response Team (SERT) training	1	➔	100.0%	N/A	N/A	Quarterly	% of SERT members trained on the State Emergency Operations Plan.
	Crisis Information Management System	1	➔	100.0%	N/A	N/A	Quarterly	% of Incident Manager installation, customization and implementation. Incident Manager is powered by WebEOC, and is the primary tool used in operational plans and procedures.
	Significant event information	1	➔	100.0%	N/A	N/A	Quarterly	% of significant events captured, tracked, displayed and archived.
HLS-EM	Resource typing completion	1	➔	100.0%	N/A	N/A	Quarterly	% of Utah's agencies (public works, fire service, police service) whose resources have been categorized according to FEMA standards.
Emergency Recovery -- establish mechanisms that will enable Utah to better recover following a catastrophic event								
HLS-EM	Federal Hazard Mitigation Grant Funding	1	➔	100.0%	100.0%	100.0%	Annual	# of dollars obtained/Total # of dollars available
HLS-EM	Compliance with FEMA guidelines required for federal individual and public assistance funding	1	➔	100.0%	100.0%	100.0%	Quarterly	# of compliant guidelines/Total # of guidelines
Emergency Mitigation -- reduce long-term risk to people and their property from hazards and their effects								
HLS-EM	Federal Pre-Disaster Mitigation Competitive (PDMC) Grant Funding	1	➔	100.0%	100.0%	100.0%	Annual	# of dollars obtained/Total # of dollars available
HLS-EM	Compliance with FEMA guidelines for PDMC funding	1	➔	100.0%	100.0%	100.0%	Quarterly	# of compliant guidelines/Total # of guidelines
HLS-EM	Chemical Stockpile Emergency Preparedness Program	1	➔	100.0%	N/A	N/A	Monthly	% of chemical stockpile incinerated.

At present, Utah officials collect individual Balanced Scorecards from the state's 24 agencies each month. They then review the scorecards and provide feedback to the agency leadership. As Hansen described, his office is most concerned when the scorecards come back to them with little revision each month. Their goal is to have the Balanced Scorecard act as a living document, with employees constantly updating metrics and targets, and finding ways to make processes more efficient in their own jobs.

If the [agency's] Balanced Scorecard never changes, I'm highly suspect. If the metrics don't change, I know they have delegated it to the intern. And so what we do is we have a monthly thing where they turn it in, we review with senior staff, and then we give feedback.

[I see the Balanced Scorecard as] facilitating the strategic conversation. Sometimes that person at the front counter, they have an idea of how to do things better. The Balanced Scorecard helps you start having a strategic dialogue between managers and workers.²⁹

According to Hansen, Utah's ultimate goal is to move their Balanced Scorecard feedback process online- much like the private-sector "dashboard" approach. This would allow the Governor's staff to view agency performance on important metrics every day, and move quickly to correct inefficiencies in process and spending.

The City of Charlotte

The City of Charlotte is widely considered the first success story of a government entity implementing the Balanced Scorecard in a public or a nonprofit setting. Charlotte put the scorecard into practice in 1996 by contracting with a consulting firm that educated and trained city staff about the Balanced Scorecard and how to develop the performance measurement system. City leadership then ensured employees were educated about the performance measurement system by discussing the Balanced Scorecard in the organization's newsletter, holding training sessions, publishing a glossary of terms used in the measurement system, and developing a *Balanced Scorecard Handbook* which contained useful definitions and other information.

Before the Balanced Scorecard, 900 measures were tracked across 13 key business units. After the scorecard's integration, the number of measures dropped to 260 across all key units.³⁰ City officials who were involved in the scorecard's implementation gave the following advice for other governmental organizations striving to use the Balanced Scorecard: (1) the scorecard requires significant time and commitment to ensure its successful development and implementation, (2) one cannot over-

communicate the scorecard goals and processes to employees, (3) a high-level champion is very important to gaining buy-in, and (4) the scorecard requires an iterative process that continually improves its effectiveness and alignment to the strategy.³¹ Below is an example of Charlotte's corporate-level scorecard measures.

Figure 5: An excerpt from the City of Charlotte's Balanced Scorecard³²

Perspective	Objective	Sample Measure	Target
Serve the Customer	Strengthen Neighborhoods	Number of stable neighborhoods as measured by the Quality of Life index	102 stable neighborhoods
Run the Business	Develop Collaborative Solutions	Percent of strategic transportation and land use projects utilizing integrated land use and transportation planning	100%
Manage Resources	Expand Tax Base and Revenues	Percent change in tax valuation in targeted neighborhoods	10% increase in tax valuation
Develop Employees	Recruit and Retain Skilled, Diverse Workforce	Percent increase in city average turnover rate	<5% increase in turnover

The City of Charlotte's successful development and deployment of the Balanced Scorecard affirms that this performance measurement system can positively impact governmental organizations and ensure a closer alignment of processes and budget with the overall strategy, increasing efficiency and effectiveness and better serving key stakeholders.

Recommendation 2: Focus on Clarke's critical priorities

While homeland security dollars are flowing to state and local governments, special interest and pork projects have limited some localities from achieving critical minimum preparedness capabilities. To remedy this situation, national security expert Richard A. Clarke has proposed a Metropolitan Area Security Plan that would offer cities a standardized and prioritized list of critical homeland security requirements. Clarke's plan provides a systematic way for federal

government to work with state and local governments to fund critical needs over superfluous and wasteful projects. As Clarke,

This concept looks at each metropolitan area holistically, determining what the area needs. The Federal government, working together with metropolitan area councils and the States, could then decide what county, city, or town agency would be assigned the capability on behalf of the entire region... We could determine how much it would cost to carry out the entire effort nationwide in three years or five... We could decide that some metropolitan areas would be given priority. If some metropolitan areas had unique requirements, they could have substituted programs.³³

While Clarke's proposal is targeted toward federal government planners, the theory behind his argument is applicable to local entities such as MOEP. By setting priorities through a performance measurement system such as the Balanced Scorecard, MOEP can target funds toward its most critical needs and track their progress toward meeting those goals. This is fundamentally different from the DHS' Target Capabilities List (TCL), which, as *The Forgotten Homeland* states, "only suggests that a capability should exist, rather than designating what level must be achieved, by when, and in what order. Using the TCL, a jurisdiction could, for example, decide to buy tow trucks with Federal block grants without first having achieved interoperable radio communications for emergency responders."³⁴

Using Richard A. Clarke's standardized priorities list, local entities can move beyond the Target Capabilities List and pork projects toward a transparent and fiscally sound system of meeting basic critical needs. Below is the list of the minimum requirements for Clarke's Metropolitan Area Security Plan. This can assist MOEP planners as they assess what Boston has already accomplished, and set future priorities through a performance measurement system.

Figure 6: Clarke's Metropolitan Area Security Plan: Sorted by order of timeframe³⁵

Within One Year

- Conduct security awareness campaigns and upgrade public address systems on public transportation systems
- Initiate random security checks on rail and subway systems
- Achieve a standard level of uniformed, K-9, and plainclothes police officers at rail and subway stations
- Create and train a local police counterterrorism unit with community outreach and civilian oversight, added needed officers to the force
- Develop local law enforcement intelligence capabilities to bring community policing activities and national counterterrorism efforts together
- Create and test local government crisis management and incident response systems to a national standard within one year

Within Two Years

- Establish an operational evacuation system for cities and neighborhoods
- Create a secure communications system
- Achieve a standard level of heavy rescue capability
- Establish intelligent video security systems for key neighborhoods and infrastructures, with appropriate civil liberties and privacy safeguards
- Establish effective public communications systems (including public address, reverse 911, email)
- Conduct training exercises to a national standard

Within Three Years

- Install intelligent video security systems at all rail and subway stations
- Upgrade communications and rescue capability for rail and subway systems, including tunnels, to a standard level
- Create a reliable, interoperable metropolitan communications system, including State and Federal agencies
- Achieve an agreed-upon level of training and equipping for first responder capability to deal with chemical, biological, and radiological incidents
- Achieve a surge ability to perform a given level of emergency medical treatment, including for mass trauma, burns, and WMD-related incidents
- For a given ratio to the population, develop the capability to add and staff additional patient beds in the event of a mass-casualty or pandemic event
- Identify and mitigate vulnerabilities at chemical plants, chemical railcar sidings, radiological material facilities, tunnels, bridges, arenas, and stadiums to national levels

In addition to utilizing this list, cities can also build a list of priorities based on a threat analysis. R.P. Eddy, CEO of Ergo and Senior Fellow for Counterterrorism at the Manhattan Institute, described a high-level process that cities can use to determine their critical priorities.³⁶ His five-step process is detailed below.

1. Figure out what the threats are to the city
2. Determine the most likely scenarios for attack
3. Determine how your city might be used as a proxy for a threat to another city, i.e. as a staging site for terrorists
4. Determine the things that are necessary to prepare, prevent, and respond to attacks
5. Build your preparation against terrorist threats in a way that helps prepare for other situations (all-hazards approach): riots, avian flu, mudslides, earthquakes, etc.

In Eddy's expert opinion, community policing should be high on the list of city priorities. As Eddy said:

Try to educate your community – increase the eyes on the target through ad campaigns, threat campaigns, and community defense, such as “if you see something, say something.” [This is the best] in terms of bang for the buck.³⁷

Eddy further expanded upon resource allocation, noting that the majority of resources should be spent on point four of the five-step process above.

This is where the lion's share of resources must be spent. A thorough implementation and review process will be necessary to answer each of these three needs (prepare, prevent, respond) across all likely scenarios and generic threats.³⁸

Focusing on addressing critical security priorities is the only way to ensure a city is able to prevent, prepare for, and respond to terrorist attacks or all-hazard threats. Inherent in determining those priorities is an effective assessment of risk, as described by Eddy above. Working in tandem, these techniques provide a strong basis for cities to begin identifying and addressing critical preparedness priorities.

Recommendation 3: Incorporate quality DHS measures

Though DHS does not employ the Balanced Scorecard, the performance measures that it uses tend to fall into one of the four typical Balanced Scorecard perspectives. Many of the measures DHS has chosen have been developed through iterative processes, and we believe that these are meaningful indicators that can be incorporated into the Balanced Scorecard. Based on our review of the Fiscal Year 2007-2009 DHS

Annual Performance Report, we were able to identify the basic types of performance measures that fell under each perspective.

Overall Perspective

1. Number of threats in a certain timeframe
2. Comparisons to nationwide preparedness percentages

Customer Perspective

1. Percentage of secured area
2. Percentage of apprehensions/screenings at designated checkpoints
3. Percentage of legal cases that result in conviction
4. Removal rate for illegal materials
5. Number of spot checks performed
6. Percentage of targeted stakeholders that obtain needed security services
7. Percentage of the population covered by certain security safeguards
8. Percentage of critical infrastructure secured
9. Five-year average of deaths and injuries
10. Average time it takes to provide essential logistical services to an impacted community
11. Percentage satisfaction of partner organizations

Financial Perspective

1. Financial loss prevented in dollars

Internal Processes Perspective

1. Percentage of workers performing essential duties
2. Percentage of information available to those who need it
3. Percentage compliance with State and Federal regulations
4. Time it takes to process key forms
5. Emergency call completion rate
6. Number of planning scenarios completed
7. Number of internal control processes tested for design and operational effectiveness

Learning and Growth Perspective

1. Number of persons trained for certain emergency situations
2. Percentage of employees performing above a certain level
3. Percentage of capabilities performed acceptably in exercises

4. Percentage of responders who say they are better prepared because of training

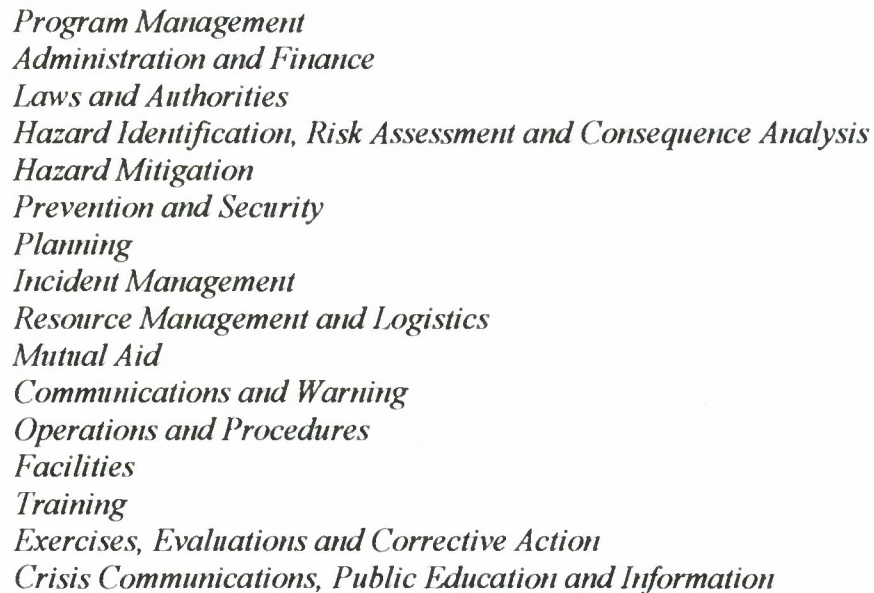
Recommendation 4: Undergo accreditation within 3 years

Emergency Management Accreditation Program (EMAP)

In addition to the in-house techniques such as the Balanced Scorecard, there are also national emergency management accreditation programs that provide guidance on measuring the performance of security initiatives. U.S Representative Heather Wilson from New Mexico raised the topic of accreditation programs in an interview for this PAE. She suggested a review of accreditation programs as a means to measure the security investment Boston has made.³⁹ The Emergency Management Accreditation Program is a "voluntary accreditation process for State, regional, territorial, tribal, county and municipal government programs that coordinate and/or provide activities related to disaster prevention, mitigation, preparedness, response, and recovery. EMAP, as an independent public nonprofit organization, fosters excellence and accountability in emergency management and homeland security programs by establishing credible standards applied in a peer review accreditation process."⁴⁰

The *Emergency Management Standard* is a tool designed for iterated use by States as part of EMAP's voluntary accreditation processes. The steps to accreditation are as follows: (1) subscription at a rate of \$450/year, (2) self-assessment via the online EMAP Program Assessment Tool, (3) submit the application with a fee of \$4,500 for the city of Boston, (4) on-site assessment by an EMAP Commission consisting of 10 impartial officials, (5) committee review, and (6) accreditation decision. In addition, the costs associated with the on-site assessment must be covered by the local emergency management program.⁴¹

The EMAP Program provides benchmarks for program management and operations and validates professional capabilities. EMAP considers the following program elements to be vital components to any program, and thereby focuses accreditation and assessment efforts in the following areas:

Figure 7: EMAP vital program elements⁴²

Program Management
Administration and Finance
Laws and Authorities
Hazard Identification, Risk Assessment and Consequence Analysis
Hazard Mitigation
Prevention and Security
Planning
Incident Management
Resource Management and Logistics
Mutual Aid
Communications and Warning
Operations and Procedures
Facilities
Training
Exercises, Evaluations and Corrective Action
Crisis Communications, Public Education and Information

In 2003, the EMAP Commission agreed to work with the DHS Emergency Preparedness and Response/ Federal Emergency Management Agency (EPR/FEMA) to conduct baseline assessments of states and territories. Currently, the second round of assessments is underway to measure progress states have made.⁴³

The Boston Mayor's Office of Emergency Preparedness has researched the EMAP program thoroughly and intends to pursue this accreditation method in the future. Currently, there are barriers that make such an endeavor infeasible for the organization. For example, MOEP lacks a recovery plan and will need to devise one before the accreditation process begins. Furthermore, the financial cost associated with the EMAP program presents difficulties for MOEP due to funding constraints. The office receives roughly 95% of its funding from the Department of Homeland Security, and regulations prohibit that money from being used for accreditation purposes. Nonetheless, MOEP is committed to undergoing the EMAP process in the future, and we would recommend this endeavor.




In discussion with the Utah Department of Public Safety, Special Programs Director Amy Lightfoot indicated that the State of Utah was the eighth state to undergo EMAP accreditation, and that they continue to report their status as a performance measure to the Utah Governor's Office.

Other Systems Researched and Considered

At the beginning of this project, MOEP requested information regarding different methods and tools presently being used by other government agencies to assess performance measurement. This section describes other measurement systems that are currently in use, but do not fit the criteria we used in determining the policy recommendations of this PAE. In general, the following systems fail in meeting one or more of the following criteria: simple format, objective measurement, forward-looking measurement, and more than mere checklists.

U.S. Department of Homeland Security

The performance measurement system used by the Department of Homeland Security fails to succeed in two criteria: simple format and forward-looking measures.

SYSTEM AND CRITERIA	Simple format	Objective measurement	Forward-looking measurement	More than mere checklists	Inexpensive
DHS System					

As America's newest agency, the U.S. Department of Homeland Security (DHS) understands the importance of measuring performance. Created by the Homeland Security Act of 2002, DHS absorbed the functions of 22 Federal agencies, each with their own mission and agenda. In addition, DHS is beholden to more than 80 congressional committees and subcommittees. With this need to provide broad accountability, DHS recently began the process of developing appropriate agency-level performance measures.

The DHS system of performance measurement

The DHS system of performance measurement seeks to tie overall department-level goals to specific programs within the 22 former agencies. Specifically, the five main DHS goals are (1) Protect our Nation from Dangerous People, (2) Protect our Nation from Dangerous Goods, (3) Protect Critical Infrastructure, (4) Build a Nimble, Effective Emergency Response System and a Culture of Preparedness, and (5) Strengthen and

Unify DHS Operations and Management.⁴⁴ Program managers are responsible for providing quarterly updates to their performance measures.

The Department of Homeland Security provides several layers of analysis for each performance goal. First, DHS provides a high-level view by rating each of its programs with either a blue circle, indicating the program has met 75% or more of its performance targets, a green triangle if 50-75% of performance targets are met, and an orange square if the program has achieved less than 50% of its performance targets. Figure 8 (below) details this measurement system.

Figure 8: DHS Performance Goals⁴⁵

Table 16. Goal 4, Objective 4.1: Success in Achieving Performance Goals

Program Performance Goal	Rating	FY 2008 Budget (in Millions)
Grants (FEMA): Enhance the Nation's preparedness by increasing the capability of States, territories, and local jurisdictions to prevent, protect, respond, and recover from terrorism and all-hazard incidents.	●	\$3,825.3
Mitigation (FEMA): Reduce the impact of natural hazards on people and property through the analysis and reduction of risks and the provision of flood insurance.	●	\$4,198.1
National Preparedness (FEMA): Improve the Nation's ability to prepare for, respond to, and recover from acts of terrorism, natural disasters, or other emergencies through exercise facilitation, implementation of the National Incident Management System, and the provision of emergency management training.	●	\$487.1
U.S. Fire Administration (FEMA): Reduce the effect of fire and all hazard emergencies by supporting and enhancing the delivery of State and local fire and emergency services and promoting public awareness.	●	\$77.2
Law Enforcement Training (FLETC): Provide law enforcement agents and officers, skilled in the latest techniques, to enforce laws and regulations, protect the Nation, and interact with the public with respect for individuals and civil liberty.	▲	\$288.7
Medical and Biodefense Programs (OHA): Bolster the Nation's biodefense readiness by enhancing the national architecture to rapidly detect, characterize, and respond effectively to a large-scale biological event.	■	\$23.3
Command, Control and Interoperability (S&T): Improve and develop operable and interoperable communications for emergency responders; develop tools to improve the security and integrity of the internet; and improve and develop automated capabilities to recognize potential threats through science and technology.	●	\$28.7

Note: Blue (●) is achieved by meeting 75% or more of performance targets, green (▲) 50 to 74%, and orange (■) less than 50%.

The second layer of analysis is at the program level. Here, DHS details the specific measures for each program performance goal, indicating the measure and whether or not the agency has achieved that measure over the last four years. If the program has not met the specified performance target, DHS indicates the corrective action that it is taking to meet that target in the future. The figure below is useful because it depicts the target and results for a specific program, indicating that a program met its target

in FY04 and FY05, but not in FY06 and FY07. In FY08, this particular performance measure was retired and will likely be replaced by an alternative measure.

Figure 9: Example of a DHS performance measurement table⁴⁶

Measure: Percent of urban area grant recipients reporting significant progress toward identified goals and objectives									
Results									Plan
FY 2005		FY 2006		FY 2007		FY 2008			FY 2009
Target	Result	Target	Result	Target	Result	Target	Result	Met	Target
---	---	---	---	---	---	26%	50%	Yes	Retired Plan Measure

Note: Dashes (---) are used if historical targets and/or results are not available as the measure was not part of the DHS Annual Performance Plan for the fiscal year indicated.

While DHS' measurement system is thorough, its format is cumbersome and it provides few forward-looking measures to track intermediate steps toward longer-range goals.

Specific DHS performance measures for state and local government

The majority of DHS-level performance measures that refer to state and local government fall under Goal 4, "Build a Nimble, Effective Emergency Response System and a Culture of Preparedness."

The following is a list of state and local-centered performance measures under the Federal Emergency Management Agency (FEMA) Grants program.

1. Percent of analyzed capabilities performed acceptably in preparedness and response exercises
2. Percent of grantees reporting significant progress toward the goals and objectives identified in their state homeland security strategies
3. Percent of urban area grant recipients reporting significant progress toward identified goals and objectives
4. Percent of significant progress toward implementation of National Preparedness Priorities
5. Percent of states and territories accredited by the Emergency Management Accreditation Program
6. Percent reduction in firefighter injuries in jurisdictions receiving Assistance to Firefighter Grants funding compared to the national average

It is important for MOEP to be aware of the performance goals DHS is using at the federal level, as they can help inform the measures MOEP chooses to implement.

DHS Lessons Learned Information Sharing website

The Department of Homeland Security saw a critical need to consolidate the lessons learned by homeland security professionals across the nation and make them readily accessible to officials working the same issues in different areas. The valuable best practices and lessons learned had become buried in the cumbersome official after-action reports and were not leveraged to improve operations and learning across jurisdictions and cities. In response, the FEMA Office of Grants & Training under DHS directed the National Memorial Institute for the Prevention of Terrorism in Oklahoma City, OK to develop a website that would consolidate and integrate lessons learned, innovative ideas and best practices for the emergency response community. In addition to providing these capabilities, the *Lessons Learned Information Sharing* (LLIS.gov) website is the national repository for hundreds after-action reports, as well as a vast library of templates that officials can use to produce plans, procedures, templates and tools. LLIS.gov uses strong security and encryption measures to protect all information on the network.⁴⁷ The website has facilitated the communication of lessons learned and valuable experiences that aim to improve homeland security activities across the nation. While this is an effective medium to communicate best practices regarding preparedness and response activities, little to no little information is shared on performance measurement practices for homeland security and emergency preparedness functions. In an interview for this PAE, Atyia Martin described the limitations of the LLIS.gov website.

*[LLIS.gov] has been helpful in terms of higher-level federal guidance, and there is some information about best practices - but not in terms of metrics. [It also does not] represent the entire universe of what people are doing. Even if it was updated regularly, there would be some challenges in terms of how much people are willing to share.*⁴⁸

In sum, while LLIS.gov provides certain useful information regarding emergency preparedness, it has contributed little in terms of helping cities define performance measures or measurement systems.

Office of Management and Budget

The measurement system used by the Office of Management and Budget lacks objective measurement, forward-looking measures, and often resembles mere checklists.

CT09-0054

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1. AUTHOR'S NAME(S)

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2. DOCUMENT TITLE

Measuring Boston's Security Investment: Methods and Tools to Assess Homeland Security Initiatives

3. ORGANIZATION

Harvard University

4. CONFERENCE/PUBLICATION NAME

No conference or publication scheduled at this time

5. DATE NEEDED

N/A

6. DOCUMENT TYPE☐ ABSTRACT☐ JOURNAL ARTICLE☒ THESIS☐ BRIEFING CHARTS☐ BROCHURE☐ COURSE DESCRIPTION☐ DISSERTATION☐ OTHER☐ FACT SHEET☐ PHOTO W / CAPTIONS☐ WORKSHOP PAPER☐ DISPLAY/EXHIBIT☐ CONFERENCE PAPER☐ TECHNICAL PAPER☐ SPEECH☐ PRESENTATION W / TEXT☐ TECHNICAL REPORT

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